U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2006-004-EA

CASEFILE/PROJECT NUMBER (optional): COC-61047

PROJECT NAME: Application Permit to Drill (APD) well Federal #2S-95-15-22

LEGAL DESCRIPTION: T2S R95W SENW Sec 15, 6th PM

APPLICANT: XTO Energy, Inc.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action: The proposed action for well Federal #2S-95-15-22 is as follows: construct 3.8 mi. new access road, construct well pad, and install buried steel pipeline parallel to access road to tie in point with existing pipeline.

Total surface disturbance on BLM would be approximately 20 acres.

Well pad and portion of access road and pipeline (approx. 0.66 mi.) would be located on private lands. Access road width would be approximately 50', including pipeline right of way (ROW). Native material used for construction of road and gravel would be purchased to improve road if well is a producer. Roads would be crowned with bar ditches and 18-24"culverts would be installed as necessary. All roadside cut and fill slopes will be revegetated immediately upon construction.

There may be a cattleguard installed at the property line between Shults Ranch and BLM land in sec. 15. Current cattleguard specifications are being negotiated with the Shults Ranch land owner.

A right-of-way will be needed for portions of the access road and pipeline that are off lease (COC-61047).

On site production facilities would consist of one 400 bbl steel oil/condensate tank and two 400 bbl steel tanks for produced water. The tanks would be surrounded by a berm constructed to contain 1½ times the volume of the largest tank. All production facilities would be painted a flat, non reflective color as specified by BLM within 6 months of installation.

A 4”-8” steel pipeline would be buried adjacent to the access road for 25,500’ and tie in to an existing pipeline, or an alternate route would tie in to an existing well located in the NESW quarter of section 29 (T.2S., R.95W.) and continue along existing roads to a different tie in point with the same existing pipeline. Total pipeline distance for the alternate route would be 26,300’. The additional 800’ (50’ROW for upgrade of road and pipeline installation = 0.9 ac.) of the alternate pipeline route would be on BLM lands.

Water needed for drilling would be either trucked to the location or temporary surface lines would be laid.

Pad construction would be from native material on private surface or purchased from private landowners or gravel pits and trucked to the location on approved access roads.

The reserve pit would typically be lined with a synthetic material, ~12 mils in thickness. The reserve pit shall be located in cut material, with at least 50% of the pit volume below original ground level. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain in place until the pit is dry. Once dry, the pit liner will be cut and removed at the mud line and the pit will be covered and buried in place.

Trash must be contained in a trash cage and hauled away to an approved disposal site as necessary but no later than at completion of drilling operations. Sewage from trailers and chemical portable toilets will be removed on a regular basis by a third party contractor and disposed of at an authorized sanitary waste facility.

Any and all chemicals used during the drilling and completion of the well will be kept to a minimum and stored within the boundaries of the well pad. The third party chemical contractor will be responsible for containment and clean-up and removal of all spilled chemicals on location.

All equipment and vehicles that will be used to drill and complete this well will remain within the boundaries of the approved well pad. Any equipment and/or vehicles parked or stored off the location will be considered trespassing on federal lands and will not be tolerated.

Materials obtained from the construction of location, like topsoil and vegetation will be stockpiled as indicated and permitted by the approved APD. The stockpiles themselves may be outside the approved boundaries of the well pad.

The top 6” of topsoil material will be removed from the location and stockpiled separately as specified by the approved APD. Topsoil along the access road will be reserved in place adjacent to the road as indicated by the approved APD. Within 30-45 days after completion of well, all equipment that is not necessary for production shall be removed. The reserve pit and that portion of the location not needed for production will be reclaimed in a given time period as specified by the BLM in the approved APD.

All road surfacing will be removed prior to the rehabilitation of roads, if necessary. Reclaimed roads will be recontoured and revegetated and will be closed to vehicle use. All disturbed areas will be recontoured to replicate the natural slope. The stockpiled topsoil will be evenly distributed over the disturbed area. Prior to seeding, all disturbed areas, including the access roads will be scarified and left with a rough surface.

Seed will be drilled or broadcast immediately after construction/recontouring. If broadcast, the seeding rate will be doubled and a harrow or some other implement will be dragged over the seeded area to assure uniform seed coverage. The seed mixture will be specified by BLM.

If necessary, an abandonment marker will be one of the following, as specified by BLM:

1) at least 4' above ground level, or
2) at restored ground level, or
3) below ground level.

In any case the marker shall be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either ¼ ¼ or footages).

A BLM approved archaeological contractor will submit the appropriate reports to the agency as required. Special stipulations will be included in the conditions of approval (COAs) of the approved APD.

A BLM approved threatened and endangered species contractor will submit the appropriate reports to the agency as required. Special stipulations will be included in the COAs of the approved APD.

A copy of the surface owner's agreement between XTO Energy Inc. and Shults Ranch LLLP is included with the APD.

The date the work would start would be 12/15/05.

No Action Alternative: No environmental impacts would occur.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: To respond to the applicant's proposal to exercise their lease rights and develop hydrocarbon reserves.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The proposed access road, pipeline, and well pad are not located within a twenty five mile radius of any special designation air sheds or non-attainment areas. The Flattops Wilderness Area (Class 1 airshed) is located approximately 27.44 miles east of the proposed well pad.

Environmental Consequences of the Proposed Action: During dry and windy periods, air quality may be compromised due to increased truck traffic on the existing access road. Overall, the proposed action by itself should not greatly compromise National Ambient Air Quality Standards (NAAQS) on an hourly or daily basis.

Environmental Consequences of the No Action Alternative: None

Mitigation: None

CULTURAL RESOURCES

Affected Environment: The proposed well pad location, access road and most of the proposed well tie pipeline have been inventoried at the Class III (100% pedestrian) level (Hays and Retter 2005, Compliance Dated 10/14/2005) with no cultural resources identified in the inventoried area.

Environmental Consequences of the Proposed Action: The proposed well pad location, access road and well tie pipeline will not impact any known cultural resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources under the No Action Alternative.

Mitigation: 1.The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Noxious/problem weeds known to occur in the project area include mullein, houndstongue and bull thistle. Occurrences of these weeds in the area are spot infestations and are located in unrevegetated areas of earthen disturbance primarily associated with oil and gas roads, locations and pipeline right of ways.

Environmental Consequences of the Proposed Action: The proposed project will create about 20 acres of earthen disturbance which will provide safe sites for the establishment of noxious and invasive species. Prompt revegetation and weed control measures will reduce but not eliminate the potential for new noxious weed infestations.

Environmental Consequences of the No Action Alternative: There would be no change from the present situation

Mitigation: Promptly revegetate all disturbed areas not necessary for production including pad and access road cut and fill slopes with Native Seed mix #2 (see Vegetation). The operator will be required to monitor the project area for a minimum of three years post disturbance and eradicate all noxious and invasive species which occur on site using materials and methods approved in advance by the Authorized Officer.

MIGRATORY BIRDS

Affected Environment: There are a number of migratory birds that fulfill nesting functions in the big sagebrush and mixed shrub communities traversed by this project during the months of May, June, and July, including several species identified as having higher conservation interest by the Rocky Mountain Bird Observatory, Partners in Flight program (i.e., Virginia's warbler, Brewer's sparrow).

Although this high plateau area has no open water or wetland areas that support or attract waterfowl use, the development of reserve pits that contain drilling fluids have attracted waterfowl use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November).

Environmental Consequences of the Proposed Action: Construction and drilling associated with this project is scheduled to commence by mid-December 2005 and would likely be finalized by the April. It is likely that the pipeline would also be installed prior to mid-May and as such, this project would have no direct influence on breeding bird nesting activity during the 2006 breeding season.

The proposed well involves about 3.8 miles of new access. Road upgrading and pipeline installation would involve the clearing of a 50 foot right-of-way (about 20 acres). With regular and frequent vehicle travel on this route, it is likely that breeding bird densities would be reduced in close proximity to this corridor. Assuming notable use reductions within 100 feet of disturbance, it is likely that habitat capacity for nesting birds would be reduced on about 75 acres of Wyoming big sagebrush and mixed shrub habitats. Based on local breeding bird information, this habitat base would be expected to support about 45 nesting pairs, most of which would be more generalized species (e.g., chipping sparrow, spotted and green-tailed towhees, blue-gray gnatcatcher), but would undoubtedly involve a number (e.g., up to 10 territories) of higher interest species such as Brewer's sparrow and Virginia's warbler. Traffic-related influences would decline appreciably after the well is drilled and completed. Based on the local extent of available habitat, this project would have discountable influence on the distribution or abundance of bird populations at the smallest landscape scale.

It has recently been brought to BLM's attention that in certain situations migratory waterfowl have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion

operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to disrupt the breeding activities or habitats of migratory birds.

Mitigation: The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineer Technician immediately.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no animals listed, proposed, or candidate to the Endangered Species Act that are known to inhabit or derive important benefit from the project site. The Magnolia area hosts a small, remnant population of greater sage grouse that are the target of population and habitat restoration efforts by the BLM and Colorado Division of Wildlife (CDOW). The greater sage-grouse is considered a BLM-sensitive species and is the subject of considerable management emphasis on a local and national basis, including concerted habitat restoration activities by BLM and CDOW. Suitable habitat is generally confined to a relatively narrow 2- to 3-mile band of sage steppe habitats north of Rio Blanco County (RBC) 3 and several miles west of the project site. Recently relocated after being displaced from a site immediately adjacent to RBC 3, Magnolia's single sage-grouse strutting ground (up to 8 roosters in 2005) is located about 2500' north of RBC 3 (county road likely used for heavy equipment access). This insular population fulfills virtually all its life history requirements, including nesting, brood-rearing and wintering functions in this constricted band of habitat roughly between Greasewood Gulch and Dark Canyon. This habitat corridor has become increasingly isolated from potential habitats lying to the south and west by frequent traffic along RBC 3, heavy gas drilling activity along its southern rim, and a spate of gas processing and compressor facility installation on its southwest corner. The habitat parcel itself is bisected by a series of ridgeline roads and a number of pipeline and powerline corridors.

Environmental Consequences of the Proposed Action: Although this project is not situated in, nor would it directly affect, suitable sage-grouse habitat, well development would involve a certain amount of traffic on RBC 3 that would traverse several miles of greater sage-

grouse habitat used throughout the year by Magnolia population. Project development is scheduled such that it would not coincide with the more sensitive period of reproduction, including nesting and brood-rearing, although it is likely that vehicle traffic will encounter birds through the fall and winter along the access road.

Increased traffic associated with this well would elevate factors that increase the risk of direct bird mortality (e.g., vehicle collisions). Efforts to reduce the risk of vehicle collisions and confining disturbances to least critical timeframes (see mitigation below) would minimize mortality and the short and longer term deterioration of habitat utility. Effectively implemented, these actions would reduce impacts to the Magnolia sage-grouse population to discountable levels.

It is not considered necessary to limit access to the well-site through the strutting period, since activity would be confined to an existing county road that was in place prior to the time of lek establishment and the well access is no closer than 0.6 mile from the lek site.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to adversely influence the Magnolia sage-grouse population or its associated habitat.

Mitigation: It is recommended that during construction, drilling, and completion operations associated with this well, the Cascade Gulch access route be used to the maximum extent possible. Necessary use of RBC 3 from Magnolia Camp east should strictly avoid the periods of 0.5 hour before sunrise to 2 hours after sunrise, and 1 hour before sunset to sunset.

In those areas that are composed predominantly of shrubs, woody debris cleared from the road and pipeline corridor should be redistributed uniformly across the pipeline corridor after final recontouring and seeding operations are complete.

Finding on the Public Land Health Standard for Threatened & Endangered species: The capacity of Magnolia's sage steppe habitats to provide long term support of this insular population of greater sage-grouse is currently at-risk due to a series of historic habitat quality issues (e.g., advanced seral succession, degraded channel systems), and more recently, a dramatic increase in natural gas development and installation of natural gas transmission facilities. Although habitat restoration activities, improved grazing management, and recent increases in moisture appear to have halted a declining population trend, the proposed well and access north of RBC 3 heralds an impending increase in activity that may jeopardize the existence of this population. As conditioned with the attached provisions, and only with the full cooperation and support of the applicant, the proposed project may be constructed and operated with only modest temporary impact to these birds, thereby allowing the project to proceed in a manner that does not aggravate conditions that pose a threat to the continued meeting of the land health standards for this special status species.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: The project area is in close proximity to known locations of a BLM sensitive plant species, the Piceance Bladderpod. Also the project is near a specific geological formation which is host to two federally listed plant species (Dudley Bluffs Bladderpod and Dudley Bluffs Twinpod). A special status species (SSS) plant survey was conducted to document the presence or absence of any SSS plant species within the project area. The access road and location occur entirely on soils derived from the Uintah Formation, which is not suitable habitat for SSS plants.

Environmental Consequences of the Proposed Action: No special status species of plants were encountered within the areas to be surveyed for this project. No suitable habitats for any SSS plant species were encountered in the project area.

Environmental Consequences of the No Action Alternative:

Mitigation: No changes in project layout are necessary to avoid impact to any SSS plant species or suitable habitat.

Finding on the Public Land Health Standard for Threatened & Endangered species: There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: The proposed well pad, pipeline and access road are situated in Dry Fork Piceance Creek and Dry Thirteen Mile Creek watersheds. The Dry Fork Piceance Creek is located in stream segment 17 while Dry Thirteen Mile Creek can be found in stream segment 16 of the White River Basin.

A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list and the Unified Watershed Assessment was done to see if any water quality concerns have been identified. The State has classified stream segment 16 and 17 of the White River Basin as "Use Protected". The antidegredation review requirements in the Antidegredation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply.

Stream segment 16 has been designated by the state as beneficial for the following uses: Warm Aquatic Life 2, Recreation 2, and Agriculture. Minimum standards for four parameters have been listed, these parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 2000/100 ml, and 630/100 ml E. coli. Stream segment 16 retained its Recreation Class 2 designation after sufficient evidence was received that a Recreation Class 1a use was unattainable.

The proposed access road and pipeline will cross Dry Prong Dry Fork Piceance Creek and an unnamed tributary to Dry Prong. At least three stream crossings have been identified.

Ground Water: A review of the US Geological Survey Ground Water Atlas of the United States (HA 730-C) was done to assess ground water resources at the location of the proposed action. The shallowest aquifer underlying the proposed action is the Uinta-Animas aquifer. The Uinta-Animas aquifer at this location consists of the Uinta Formation and the Parachute Creek member of the Green River Formation. During the drilling process it is likely that deep ground water from the Fort Union Formation and Mesaverde Group also be encountered.

A significant portion of the proposed access road and pipeline are located in alluvial/colluvial material in the Dry Prong drainage. In the event of a leak or spill of contaminants during transport, local ground water could be at risk.

Environmental Consequences of the Proposed Action: Construction of a new access road will result in substantial losses of effective ground cover. Exposed soils will be vulnerable to erosional processes increasing sediment supply to the system. Heavy truck traffic will cause rutting to develop over portions of the roadway. Rut development will channelize surface water down the roadway accelerating erosion rates. Heavy truck traffic on the road way will also increase soil compaction resulting in erosive overland flows.

Improper design and placement of drainage relief structures will cause excessive erosion if failure results.

Water quality issues may also arise if leaks or spills involving environmentally unfriendly substances are allowed to penetrate local water tables or contact surface waters. Contaminants having potential to be in direct contact with surface water would be detrimental to water quality as well as the health of riparian communities and wildlife in the downstream reaches.

CSU-1 "fragile" soils will be vulnerable to erosion with a loss in ground cover and vegetation. In the absence of functional drainage structures, sediment loads will be elevated to down stream reaches adversely impacting stream hydrology and channel morphology.

Environmental Consequences of the No Action Alternative: None

Mitigation: The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so. Construction activities associated with the proposed actions require a storm-water discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. As a condition of the permit, a Storm-water Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP available for review by the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies (including springs and seeps) without BLM approval.

All road construction/upgrades must strictly adhere to "Gold Book" surface operating standards for oil and gas exploration and development. Copies of the "Gold Book" can be obtained at the WRFO.

If culverts are used then the following conditions of approval (47 – 53) from the White River ROD/RMP would apply:

- Culverts should be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.
- Culverts should be designed and placed to assure the adequate passage of fish, provide minimum impact on water quality, and handle peak runoff and flood waters.
- Culvert placement should lay on solid ground to avoid road failures.
- Proper sized aggregate and rip rap should be used during culvert construction.
- Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces.
- Provide energy dissipaters at culvert outlets or drainage dips.
- Place rip rap at culvert entrance to streamline water flow and reduce erosion.

Finding on the Public Land Health Standard for water quality: Stream segment 16 of the White River Basin currently meets water quality standards set by the state. By following

suggested mitigation, water quality in the affected stream segment will continue to meet standards.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC's, flood plains, prime and unique farmlands, wetlands and riparian zones, Wilderness, or Wild and Scenic Rivers exist within the area affected by the proposed action. Because the proposed and no action alternatives would have no reasonable potential to influence wetland or riparian communities, assessment of the applicable Public Land Health Standard is not necessary. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: The following data is a product of an order III soil survey conducted by the Natural Resource Conservation Service (NRCS). The accompanying table highlights important soil characteristics. A complete summary of this information can be found at the White River Field Office.

CSU-1 "fragile soils" will be encountered along the access road for the first ~0.5 miles above the first crossing. As stated in the White River ROD/RMP, surface disturbing activities on fragile soils with slopes greater than 35 percent will be allowed only after an engineered construction/reclamation plan is submitted by the operator and approved by the Area Manager.

Soil Number	Soil Name	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock
42	Irigul channery loam	5-50%	Loamy Slopes	<2	Medium to rapid	Very high	10-20
43	Irigul-Parachute complex	12-45%5-30%	Loamy Slopes/Mountain Loam	<2	Rapid	Slight to high	10-20
59	Parachute-Rhone loams	5-30%	Mountain Loam	<2	Medium	Moderate to high	20-40
76	Rhone loam	30-75%	Brushy Loam	<2	Medium	Very high	40-60
91	Torriorthents-Rock Outcrop complex	15-90%	Stoney Foothills		Rapid	Very high	10-20

42-Irigul channery loam (5 to 50 percent slopes) is a shallow, well drained soil located on ridges and mountainsides. It formed in residuum derived from sandstone and hard shale. The native vegetation is mainly grasses and shrubs. Typically, the surface layer is grayish brown channery loam 5 inches thick. The underlying material is brown extremely channery loam 7 inches thick. Hard sandstone is at a depth of 12 inches. Depth to hard sandstone or shale is 10 to 20 inches. Permeability of this Irigul soil is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium to rapid, and the hazard of water erosion is very high.

43-Irigul-Parachute complex (5 to 30 percent slopes) is located on ridges and mountainsides. The native vegetation is mainly grasses and shrubs. The Irigul soil is shallow and well drained. It formed in residuum derived from sandstone and hard shale. Typically, the surface layer is grayish brown channery loam 5 inches thick. The underlying material is brown extremely channery loam 7 inches thick. Hard sandstone is at a depth of 12 inches. Depth to hard sandstone or shale is 10 to 20 inches. Permeability of the Irigul soil is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is medium to rapid, and the hazard of water erosion is very high.

The Parachute soil is moderately deep and well drained. It formed in residuum derived dominantly from sandstone. Typically, the surface layer is grayish brown loam 4 inches thick. The upper 20 inches of the subsoil is grayish brown loam channery loam, and the lower 8 inches is pale brown extremely channery sandy loam 6 inches thick. Sandstone is at a depth of 38 inches. Depth to sandstone or shale ranges from 20 to 40 inches. Permeability of the Parachute soil is moderate. Available water capacity is low. Effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is moderate to very high.

59-Parachute-Rhone loams (5 to 30 percent) is found on mountainsides and upland ridges. The native vegetation is mainly brush and grasses. The Parachute soil is moderately deep and well drained. It formed in residuum derived dominantly from sandstone. Typically, the surface layer is grayish brown loam 4 inches thick. The upper 10 inches of the subsoil is grayish brown loam, and the lower 10 inches is grayish brown channery loam. The next layer is pale brown very channery loam 8 inches thick. The substratum is very pale brown extremely channery sandy loam 9 inches thick. Fractured sandstone is at a depth of about 38 inches. Depth to sandstone ranges from 20 to 40 inches. Permeability of the Parachute soil is moderate. Available water capacity is low. Effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

The Rhone soil is deep and well drained. It formed in residuum and colluvium derived dominantly from sandstone. Typically, the upper part of the surface layer is dark grayish brown loam about 8 inches thick, the next 16 inches is dark grayish brown loam, and the lower part is grayish brown very channery loam 16 inches thick. The substratum is brown very channery loam 10 inches thick. Fractured sandstone is at a depth of about 50 inches. Depth to sandstone ranges from 40 to 60 inches. Permeability of the Rhone soil is moderate. Available water capacity is high. Effective rooting depth is 40 to 60 inches. Runoff is medium, and the hazard of water erosion is moderate to high.

76-Rhone loam (30 to 75 percent slopes) is a deep, well drained soil found on mountainsides, upland ridges, and side slopes. It formed in residuum and colluvium derived dominantly from sandstone. The native vegetation is mainly brush and grasses. Typically, the upper part of the surface layer is dark grayish brown loam about 8 inches thick. The lower part is dark grayish brown loam about 16 inches thick. The next layer is grayish brown very channery loam 16 inches thick. The underlying material is brown very channery loam 10 inches thick. Fractured sandstone is at a depth of 50 inches. Depth to sandstone ranges form 40 to 60 inches. Permeability of the Rhone soil is moderate. Available water capacity is high. Effective rooting depth is 40 to 60 or more inches. Runoff is medium, and the hazard of water erosion is very high.

91-Torriorthents-Rock outcrop complex (15 to 90 percent slopes) is located on extremely rough and eroded areas on mountains, hills, ridges, and canyon sides. The native vegetation is mainly sparse shrubs and grasses with some pinyon and juniper trees. Torriorthents are very shallow to moderately deep and are will drained and somewhat excessively drained. No single profile of Torriorthents is typical, but one commonly observed in the survey area has a surface layer of pale brown channery loam about 3 inches thick. The underlying material is very pale brown channery loam, very channery loam, or fine sandy loam about 13 inches thick. Shale or sandstone is at a depth of 16 inches. Torriorthents are calcareous throughout. Permeability of the Torriorthents is moderate. Available water capacity is very low. Effective rooting depth is 10 to 20 inches. Runoff is very rapid, and the hazard of water erosion is very high.

Environmental Consequences of the Proposed Action: Construction of the access road and well pad will reduce ground cover resulting in increased soil exposure to erosional processes. The use of heavy equipment will cause soil compaction which in turn will decrease infiltration and permeability rates resulting in increased potential for erosive overland flows.

Road construction through fragile soils en route to the proposed well pad will destabilize slopes in the affected areas increasing potential for sloughing on the cut slope. In addition, improper drainage relief structures will lead to accelerated erosion rates.

Leaks or spills of environmentally unfriendly substances may contaminate soils hindering revegetation efforts. Soils unable to support a healthy plant community will be less cohesive (due to lack of root structure) and more vulnerable to erosional processes.

Environmental Consequences of the No Action Alternative: None

Mitigation: All road and pipeline construction located on BLM surfaces must strictly adhere to "Gold Book" surface operating standards for oil and gas exploration and development. Copies of the "Gold Book" can be obtained at the WRFO.

At locations fragile soils are encountered (BLM surfaces) along the access way, an engineered construction/reclamation plan must be submitted and approved by the Area Manager before any construction will be permitted. The suggested seed mix (see vegetation section) will be used in combination with silt fences and geo-textile fabric on fill slopes (BLM surfaces) to enhance stabilization. All surface disturbing activities on BLM lands must stop when soils or road

surfaces become saturated to a depth of three inches. No mud blading of roads will be permitted on BLM surfaces.

Stockpiled soils (BLM surfaces) located on slopes greater than 5% will be required to have silt fences positioned on down gradient sides. This action will minimize sedimentation away from of stockpiles.

Complete reclamation of the proposed access road on BLM surfaces will follow abandonment of well pad. Portions of the access road on BLM surfaces will be recontoured, covered with woody debris, and 100% of disturbed surfaces will be revegetated with the appropriate seed mix (see vegetation section).

Finding on the Public Land Health Standard for upland soils: Soils within the project area meeting the criteria established in the standard for upland soils. Following suggested mitigation, soils will continue to meat health standards.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Vegetation in the area of the proposed project is predominately Mixed Utah serviceberry/mountain big sagebrush with scattered mottes of Gambel oak on the uplands and mountain big sagebrush/green rabbitbrush in the Dry prong of Dry fork. The proposed action is within both the Thirteenmile (06011) and Main Dry Fork (06007) allotments. However, the majority of the proposed action (17 + acres) is within the Main Dry Fork allotment.

Environmental Consequences of the Proposed Action: The primary impact of the proposed action upon vegetation will be from physical destruction of vegetation on about 19 acres. Prompt revegetation of disturbed areas and suppression of noxious/problem weeds will reduce but not eliminate the long term negative impact of oil and gas development and infrastructure on native plant communities associated with this project.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Mitigation: All disturbed areas for the pipeline, access road and location will be reclaimed within the first growing season or prior to the first full growing season following disturbance with Native Seed mix #2:

Seed Mix #	Species (Variety)	Lbs. PLS per Acre	Ecological Sites
2	Western wheatgrass (Rosanna) Indian ricegrass (Nezpar) Bluebunch wheatgrass (Whitmar) Thickspike wheatgrass (Critana) Green needlegrass (Lodorm) Globemallow	2 1 2 2 1 0.5	Deep Loam, Loamy 10"-14", Loamy Breaks, Loamy Slopes, Rolling Loam, Valley Bench

Successful revegetation should be achieved within three years. The operator will be required to monitor the project site(s) for a minimum of three years post-construction to detect the presence of noxious/invasive species. Any such species which occur will be eradicated using materials and methods approved in advance by the Authorized Officer.

There will be a minimum 16 foot wide cattleguard built to BLM specifications installed where the access road crosses the Main Dry fork allotment boundary fence in NWNW Sec 28, T 2 S R 95 W. Cattleguard specifications will be provided as part of approval of this APD.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Most of the public land plant communities within the area of the proposed action have an appropriate age structure and diversity of species which meet the criteria established in the standard for vegetation. With successful reclamation, the proposed action would not change this status.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: This pad is separated from the nearest perennial reach (Dry Fork of Piceance) by a minimum 1.5 miles. The Dry Fork supports sporadic flow and a simple invertebrate community. Piceance Creek, a perennial stream that is heavily influenced by seasonal irrigation drawdown, is the nearest system that supports a vertebrate community (e.g., small discontinuous populations of leopard frog, speckled dace, and flannel-mouthed sucker). Piceance Creek is separated from the proposed action by 7-8 miles with the nearest BLM-administered reach about 2 miles downstream of this point.

Environmental Consequences of the Proposed Action: This project is situated on a gentle-gradient ridge separated from the nearest aquatic system by 1.5 miles of overland flow and ephemeral channel. Pad and road construction would have no direct impact on aquatic habitats. With the application of best management practices (BMPs) associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Dry Fork or Piceance Creek channels or their associated aquatic values.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on downstream aquatic habitat.

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The Public Land Health Standards are not applicable to downstream reaches that support prolonged intermittent or perennial flows since they are substantially private or State-owned. The nearest BLM-administered reach is greater than 10 miles downstream. Neither the proposed or no-action alternative would have any reasonable potential to influence the function or condition of subtending channels or their aquatic habitat values.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The upper and middle elevation slopes of Magnolia are used extensively by deer and elk from September through December and again in April and May. Although the project area is used primarily during seasonal migration and the early winter months, smaller numbers of deer and elk summer across the project area in mesic draws. Non-game wildlife using this area are typical and widely distributed in extensive like habitats across the Resource Area and northwest Colorado; there are no narrowly endemic or highly specialized species known to inhabit those lands potentially influenced by this action. Suitable woodland habitat within 500 feet of surface disturbance was inspected for raptor nest activity by wildlife consultants in July 2005. No evidence of past or current nesting use was detected.

Environmental Consequences of the Proposed Action: The proposed action represents a substantial expansion of natural gas development activity to the north and east of Magnolia. The proposed well requires construction or reconstruction of about 3 miles of access road on BLM-administered lands, increasing long-term road density and imposing avoidance-related effects (i.e., behavioral avoidance and habitat disuse; increased energetic demands) across a minimum 120 acres. Localized road density is currently about 2.6 miles per square mile, which is within the desired road density objective (3 miles per square mile) established for big game winter ranges in the White River ROD/RMP. Because of the existing road network in this area, it is not feasible to mitigate the adverse effects of roads on big game habitat utility through gating. Access established for the well would increase local road density to about 3.8 miles per square mile—well exceeding the White River ROD/RMP objective. The only means of regulating vehicular use on this access is through the cooperation of the private landowner in section 15, in which case effective gating at the mouth of the draw (center of section 21) would reduce effective habitat loss to minor proportions.

The long-term occupation of about 11 acres of foraging area (road) and more temporary forage reductions on about 8 acres for the pipeline would have negligible influence on big game forage availability, with the herbaceous component ultimately offset by reclamation.

Similar to the discussion above, road upgrading and pad construction would incrementally reduce the current extent and utility of associated nongame bird and mammal habitats. The longer term loss of 19 acres of sagebrush and mixed shrub habitats, with up to 8 acres subsequently rehabilitated, is considered minor.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have potential to affect resident wildlife populations or associated habitat.

Mitigation: The use of interim reclamation techniques will be used to the extent practicable on this pad such that: 1) all available topsoil material would be used to rehabilitate recontoured cut and fill slopes and areas outside the anchors (maintaining the viability of the soils for final reclamation), 2) production facilities are located to maximize the extent of surface disturbance available for recontouring and reclamation after completion operations and through

the productive life of the well (e.g., where access road enters pad), and 3) all disturbed areas are reseeded and, if necessary, effectively fenced to control livestock use once well completion activities have been finalized (this includes cut and fill slopes of roads and trial application on the roadbeds themselves).

In the event newly constructed access roads on BLM surface are no longer needed for well maintenance or development (i.e., all roadbeds beyond well pad in southwest quarter of section 21), the roads will be recontoured to original grade (i.e., cuts and fills not merely reduced as in the Conditions of Approval) prior to reclamation and subsequent vehicle use effectively precluded.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): On a landscape scale, the project area meets the public land health standards for terrestrial animal communities. The proposed action is considered an incremental addition to those lands dedicated to mineral development, but would not detract appreciably from continued meeting of the land health standard at the landscape scale.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management			X
Forest Management		X	
Geology and Minerals			X
Hydrology/Water Rights		X	
Law Enforcement		X	
Noise		X	
Paleontology			X
Rangeland Management		X	
Realty Authorizations			X
Recreation			X
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

ACCESS AND TRANSPORTATION

Affected Environment: No routes currently persist along proposed access road.

Environmental Consequences of the Proposed Action: Proposed 3.8 mile access road will provide additional access for public land users.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

FIRE MANAGEMENT

Affected Environment: The #2S-98-15-22 well proposed involves approximately 3.8 miles of road and pipeline construction for an approximate total of 20 acres of disturbance. Due to the existing tree cover of pinion and juniper, sagebrush, and oakbrush there will be a need for the operator to clear this vegetation. If not adequately treated, the woody vegetative material will result in elevated hazardous fuels conditions and remain on-site for many years. These accumulations of dead material are very receptive to fire brands and spotting from wind driven fires and can greatly accelerate the rate of spread of the fire front. The road(s) associated with this project may be used by the general public for a variety of uses, including access for fire wood gathering, hunting and other dispersed recreational activities. Increased public use of an area will nearly always result in an increased potential for man-caused wildland fires.

The National Fire Plan calls for "firefighter and public safety" to be the highest priority for all fire management activities. In the pinion, juniper, and brush types common on the White River Resource Area, roads and other man-made openings are commonly used as fuel breaks or barriers to control the spread of both wildland and prescribed fires. By reducing the activity fuels created from this proposal, future fire management efforts in this area should be safer for those involved and more effective.

Environmental Consequences of the Proposed Action: There will be approximately 20 acres of road and pipeline construction requiring the removal of pinion/juniper, sage, and oakbrush fuel types on the #2S-98-15-22 well site. If not treated the slash and woody debris will create an elevated hazardous dead fuel loading which could pose significant control problems in the event of a wildfire. Additionally there would be greater threat to public, XTO energy, and fire suppression personnel.

Environmental Consequences of the No Action Alternative: There would be no tree removal or disturbance which would cause significant dead fuel loading.

Mitigation: A hydro-ax or other mulching type machine should be used to remove the vegetation. The machines are capable of shredding trees up to 12" in diameter and 15' tall as well as mowing brush like a conventional brush beater. It generally leaves small branches and pieces of wood from pencil size up to bowling ball size. The mulch is evenly scattered across the surface and the tires or tracks distribute the weight of the equipment; this would effectively breakdown the woody fuel and scatter the debris thereby eliminating any hazardous fuel load adjacent to the new road and pipeline ROW.

GEOLOGY AND MINERALS

Affected Environment: The surface geologic formation of the well location is Uinta and XTO's targeted zone is in the Mesaverde. During drilling potential water, oil shale, and gas zones will be encountered from surface to the targeted zone. Fresh water aquifers that will be encountered during drilling are the Perched in the Uinta, the A-groove and, B-groove in the Green River formation. These aquifer zones along with the Wasatch formation are known for difficulties in drilling and cementing. The well is located on Federal oil and Gas Lease COC-061047.

Environmental Consequences of the Proposed Action: The cementing procedure of the proposed action isolates the formations and will prevent the migration of gas, water, and oil between formations. This includes oil shale and coal zones. However, conventional recovery of the coals is not considered feasible at the depths that are encountered in the well. Development of this well will deplete the natural gas resources in the targeted formation

Environmental Consequences of the No Action Alternative: The natural gas resources in the targeted zone would not be recovered at this time.

Mitigation: None

PALEONTOLOGY

Affected Environment: The surface of the proposed well pad location, access route and well tie pipeline has been inventoried at the Class III (100% pedestrian) level (Browne and Murphy 2005, Compliance Dated 10/21/2005) with no new fossil resources identified on the surface. However, the proposed action is located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM has classified as a Condition I formation meaning it is known to produce scientifically important fossil resources.

Environmental Consequences of the Proposed Action: If it becomes necessary to excavate into the underlying rock formation to construct the road, level the well pad or excavate the reserve/blooie pit there is a potential to impact scientifically important fossil resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to fossil resources under the No Action Alternative.

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. A paleontological monitor shall be required for all excavations into the underlying rock formations. The paleontologist shall be present prior to the initiation of all excavations into any rock.

REALTY AUTHORIZATIONS

Affected Environment: An amendment to XTO's existing rights-of-way, COC69027 for access and COC69029 for the pipeline will be required.

Environmental Consequences of the Proposed Action: The proposed action will be for the construction, operation, and maintenance of the off-lease portion of the access road. The pipeline will be from where it leaves private property and goes south to a tie-in point with an existing pipeline.

Environmental Consequences of the No Action Alternative: None

Mitigation: 1. A "Notice to Proceed" will be issued for the pipeline route that states the pipeline cannot be constructed until the Federal 2S-95-15-22 well has proven production.

2. The "Gold Book Standards" will be followed for the construction of the pipeline.

3. The Conditions of Approval for the APD will be applied to the amendment and made a part of the right-of-way grant.

4. The original terms, conditions, and stipulations of the original right-of-way grants for COC69027 and COC69028 will remain in full force and effect.

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The project area has been delineated a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

Environmental Consequences of the Proposed Action: The public will lose approximately 20 acres of dispersed recreation potential while wells are in operation. The public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If action coincides with hunting seasons (September through November) it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pads and roads, an increase of traffic could be expected increasing the likihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Environmental Consequences of the No Action Alternative: No loss of dispersed recreation potential and no impact to hunting recreationists.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The proposed action would be located in an area with a VRM III classification. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: The well pad and a portion of the access road and pipeline would be located on private surface, and not subject to VRM management objectives. That portion of the access road and pipeline located on BLM lands would be on the sides of slopes above two drainages and not visible from county road 3, which would be the route traveled by a casual observer. Since the well pad would be near the top of a ridge, the production facilities should be painted Juniper Green to blend with and mimic the surrounding and distant vegetation types. The level of change to the characteristic landscape would be low and the objectives of the VRM III classification would be retained.

Environmental Consequences of the No Action Alternative: There would be no environmental consequences.

Mitigation: All permanent (onsite for six [6] months or longer) structures, facilities and equipment placed above ground shall be painted Munsell Soil Color Chart *Juniper Green* within six months of installation.

CUMULATIVE IMPACTS SUMMARY: This action is consistent with the scope of impacts addressed in the White River ROD/RMP. The cumulative impacts of these activities are addressed in the White River ROD/RMP for each resource value that would be affected by the proposed action.

REFERENCES CITED:

Browne, Lori S., M.S., and Paul C. Murphey, Ph.D.
2005 Paleontological Assessment for the XTO Energy Federal Well 2S-95-15-22, Rio Blanco County, Colorado. SWCA Environmental Consultants, South Pasadena, California.

Hays, Heidi Guy, and Michael J. Retter
2005 Class III Cultural Resource Inventory of the XTO Energy Federal Well 2S-95-15-22, Rio Blanco County, Colorado. SWCA Environmental Consultants, Broomfield, Colorado.

Tweto, Ogden
1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources Paleontological Resources
Mark Hafkenschiel	Rangeland Management Specialist	Invasive, Non-Native Species
Ed Hollowed	Wildlife Biologist	Migratory Birds
Ed Hollowed	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species
Melissa Kindall	Hazmat Collateral	Wastes, Hazardous or Solid
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Ed Hollowed	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Nate Dieterich	Hydrologist	Soils
Mark Hafkenschiel	Rangeland Management Specialist	Vegetation
Ed Hollowed	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Mark Hafkenschiel	Rangeland Management Specialist	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources
Valerie Dobrich	Natural Resource Specialist	Wild Horses

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2006-004-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve the development of well Federal #2S-95-15-22, construct 3.8 miles of new access road and to install a buried steel pipeline parallel to access road with the mitigation listed below. The proposed actions are in concert with the objectives of the White River ROD/RMP in that they would allow development of federal oil and gas resources in a manner that provides reasonable protection for other resource values. Protection for other resource values will be assured by implementation of the mitigation measures described below and attached to the APDs as Conditions of Approval and to the right-of-way grants as stipulations.

MITIGATION MEASURES:

1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines

for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

3. Promptly revegetate all disturbed areas not necessary for production including pad and access road cut and fill slopes with Native Seed mix #2 (see Vegetation). The operator will be required to monitor the project area for a minimum of three years post disturbance and eradicate all noxious and invasive species which occur on site using materials and methods approved in advance by the Authorized Officer.

4. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineer Technician immediately.

5. It is recommended that during construction, drilling, and completion operations associated with this well, the Cascade Gulch access route be used to the maximum extent possible. Necessary use of RBC 3 from Magnolia Camp east should strictly avoid the periods of 0.5 hour before sunrise to 2 hours after sunrise, and 1 hour before sunset to sunset.

6. In those areas that are composed predominantly of shrubs, woody debris cleared from the road and pipeline corridor should be redistributed uniformly across the pipeline corridor after final recontouring and seeding operations are complete.

7. The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

8. The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so. Construction activities associated with the proposed actions require a storm-water discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. As a condition of the permit, a Storm-water Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport.

9. The applicant is required to have a copy of the SWMP available for review by the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

10. No operations using chemical processes or other pollutants in their activities will be allowed to occur within 200 feet of any water bodies (including springs and seeps) without BLM approval.

11. All road construction/upgrades must strictly adhere to "Gold Book" surface operating standards for oil and gas exploration and development. Copies of the "Gold Book" can be obtained at the WRFO.

12. If culverts are used then the following conditions of approval (47 – 53) from the White River ROD/RMP would apply:

- Culverts should be designed and constructed according to the standards provided in BLM Manual 9112. The design, review and evaluation must be accomplished under the direct supervision of a registered professional engineer.
- Culverts should be designed and placed to assure the adequate passage of fish, provide minimum impact on water quality, and handle peak runoff and flood waters.
- Culvert placement should lay on solid ground to avoid road failures.
- Proper sized aggregate and rip rap should be used during culvert construction.
- Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces.
- Provide energy dissipaters at culvert outlets or drainage dips.
- Place rip rap at culvert entrance to streamline water flow and reduce erosion.

13. All road and pipeline construction located on BLM surfaces must strictly adhere to "Gold Book" surface operating standards for oil and gas exploration and development. Copies of the "Gold Book" can be obtained at the WRFO.

14. At locations fragile soils are encountered (BLM surfaces) along the access way, an engineered construction/reclamation plan must be submitted and approved by the Area Manager before any construction will be permitted. The suggested seed mix (see vegetation section) will be used in combination with silt fences and geo-textile fabric on fill slopes (BLM surfaces) to enhance stabilization.

15. All surface disturbing activities on BLM lands must stop when soils or road surfaces become saturated to a depth of three inches.

16. No mud blading of roads will be permitted on BLM surfaces.

17. Stockpiled soils (BLM surfaces) located on slopes greater than 5% will be required to have silt fences positioned on down gradient sides. This action will minimize sedimentation away from of stockpiles.

18. Complete reclamation of the proposed access road on BLM surfaces will follow abandonment of well pad. Portions of the access road on BLM surfaces will be recontoured,

covered with woody debris, and 100% of disturbed surfaces will be revegetated with the appropriate seed mix (see vegetation section).

19. All disturbed areas for the pipeline, access road and location will be reclaimed within the first growing season or prior to the first full growing season following disturbance with Native Seed mix #2:

Seed Mix #	Species (Variety)	Lbs. PLS per Acre	Ecological Sites
2	Western wheatgrass (Rosanna) Indian ricegrass (Nezpar) Bluebunch wheatgrass (Whitmar) Thickspike wheatgrass (Critana) Green needlegrass (Lodorm) Globemallow	2 1 2 2 1 0.5	Deep Loam, Loamy 10"-14", Loamy Breaks, Loamy Slopes, Rolling Loam, Valley Bench

Successful revegetation should be achieved within three years. The operator will be required to monitor the project site(s) for a minimum of three years post-construction to detect the presence of noxious/invasive species. Any such species which occur will be eradicated using materials and methods approved in advance by the Authorized Officer.

20. There will be a minimum 16 foot wide cattleguard built to BLM specifications installed where the access road crosses the Main Dry fork allotment boundary fence in NWNW Sec 28, T 2 S R 95 W. Cattleguard specifications will be provided as part of approval of this APD.

21. The use of interim reclamation techniques will be used to the extent practicable on this pad such that:

- all available topsoil material would be used to rehabilitate recontoured cut and fill slopes and areas outside the anchors (maintaining the viability of the soils for final reclamation),
- production facilities are located to maximize the extent of surface disturbance available for recontouring and reclamation after completion operations and through the productive life of the well (e.g., where access road enters pad), and 3) all disturbed areas are reseeded and, if necessary, effectively fenced to control livestock use once well completion activities have been finalized (this includes cut and fill slopes of roads and trial application on the roadbeds themselves).

22. In the event newly constructed access roads on BLM surface are no longer needed for well maintenance or development (i.e., all roadbeds beyond well pad in southwest quarter of section 21), the roads will be recontoured to original grade (i.e., cuts and fills not merely reduced as in the Conditions of Approval) prior to reclamation and subsequent vehicle use effectively precluded.

23. A hydro-ax or other mulching type machine should be used to remove the vegetation. The machines are capable of shredding trees up to 12" in diameter and 15' tall as well as mowing brush like a conventional brush beater. It generally leaves small branches and pieces of wood from pencil size up to bowling ball size. The mulch is evenly scattered across the surface and

the tires or tracks distribute the weight of the equipment; this would effectively breakdown the woody fuel and scatter the debris thereby eliminating any hazardous fuel load adjacent to the new road and pipeline ROW.

24 The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

25. A paleontological monitor shall be required for all excavations into the underlying rock formations. The paleontologist shall be present prior to the initiation of all excavations into any rock.

26. A "Notice to Proceed" will be issued for the pipeline route that states the pipeline cannot be constructed until the Federal 2S-95-15-22 well has proven production.

27. The "Gold Book Standards" will be followed for the construction of the pipeline.

28. The Conditions of Approval for the APD will be applied to the amendment and made a part of the right-of-way grant.

29. The original terms, conditions, and stipulations of the original right-of-way grants for COC69027 and COC69028 will remain in full force and effect.

30. All permanent (onsite for six [6] months or longer) structures, facilities and equipment placed above ground shall be painted Munsell Soil Color Chart *Juniper Green* within six months of installation.

NAME OF PREPARER: Keith Whitaker

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Field Manager

DATE SIGNED: 11/30/05

ATTACHMENTS: Location map of the Proposed Action

Location of Proposed Action
CO-110-2006-004-EA